

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter illustrates the methodology used in conducting this study and it focuses on the research design, population and sample, data collection method and procedure then followed by research instrument and data analysis.

#### 3.2 Research Design

According to Malhotra (2007), research design is an overall framework of a research that explains the direction and method to be used in the study to accumulate the information needed, either from primary or secondary sources. Other researcher such as Ahuja (2010) define research design as the plan, structure and strategy and investigation concaved so as to obtain ensured to search question and control variance.

This study used quantitative method. According to Adedoyin (2020), quantitative research regarded as the organized inquiry about phenomenon through collection of numerical data and execution of statistical, mathematical or computational techniques. The source of quantitative research is positivism paradigm that advocates for approaches embedded in statistical breakdown that involves other strategies like inferential statistics, testing of hypotheses, mathematical exposition, experimental and quasi experimental design

randomization, blinding, structured protocols, and questionnaires with restricted variety of prearranged answer.

The advantage of this research design is the use of statistical data as a tool for saving time and resources. Bryman (2001) argue that quantitative research approach is the research that places emphasis on numbers and figures in the collection and analysis of data. Data like numbers, percentages and measurable figures can be calculated and conducted by a computer using a Statistical Package for Social Science (SPSS) which save lot of energy and resources. (Gorard, 2001)

In addition, replicability is another benefit derivable from the use of this research design. Since the research design basically relies on hypotheses testing, the researcher need not to do intelligent guesswork, rather he would follow clear guidelines and objectives (Lichtman, 2013). Moreover, the advantages of quantitative research are repeating this study is possible because of standardized data collection protocols and tangible definitions of abstract concept. In other word, this study can be reproduced in other cultural setting, times or with different groups of participant. Results can be compared statistically. Furthermore, data from large samples can be processed and analysed using reliable and consistent procedures through quantitative data analysis.

### 3.3 Population and Sample

A population is a group of potential participants to whom you want to generalize the results of a study (Salkind, 2022). The population in this study are 62 employees who work at Majlis Agama Islam Kedah.

Table 3.1  
Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: N is Population Size; S is Sample Size  
Source: Krejcie & Morgan, 1970

Figure 7: Table for determining sample size (Krejcie & Morgan, 1970)

Sample is a subset of population (Salkind, 2022). To determine the sample size, this study apply the formula that has been introduced by Krejcie and Morgan (1970) as shown in Figure 7 above.

To select the sample from population, this study used non-probability sampling technique. Non-probability sampling is generally used in experimental or trial research and does not represent the target population. Non-probability sampling uses subjective judgement and utilizes convenient selection of units from the population (Fowler, 2002). Non-probability

sampling has the merit of the faster speed of data collection, lower survey cost, and easier accessibility to the potential respondents (Kim, 2017).

In specific, this study applies a convenience sampling technique. This sampling technique allow researcher to choose the sample from the ones that the researcher can access most easily. The advantages to use this convenient sampling are this strategy convenient and inexpensive (Salkind, 2022).

### **3.4 Data Collection Method and Procedure**

The data for this study has been collected through questionnaire. Questionnaire is regarded as one of the primary tools for data collection (Kabir, 2016; Taherdoost, 2021). The questionnaire is one of the common devices for collecting information and a form or instrument including a set of questions and secure answers that respondents from a specific population fill to give the researcher information needed for the study (Pandey & Pandey, 2015). Advantages of using questionnaire as stated by Rathi and Ronald (2022) are data collection questionnaire tool is cost, time, energy and resource-saving compared to other tools. In addition, the questionnaire tool of data collection has less administrative hassles and it is useful though the population is huge and geographically scattered.

The questionnaire has been distributed to the respondent through online using google form. The questionnaire has been distributed through online google form because majority of employees are not at their workstation during working hours for field work. In addition, the office location under Majlis Agama Islam Kedah also varies such as at Alor Setar and Sungai Petani that become barrier for researcher to meet them face to face. All the questions in the questionnaire have been written in Malay language because the population are Malay. The

distribution of google form to employees at Majlis Agama Islam Kedah has been facilitated by the administrative assistant from Investigation and Strategic Design Unit.

### **3.5 Research Instrument**

The instrument of this study was developed based on the measurement that has been developed by previous studies. The respondents have answered the questionnaire based on a 5 Likert Scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree). A cover letter that explains the purpose of the study and the confidentiality aspect has been stated in the beginning of the questionnaire.

The questionnaire for employees has been divided into four sections. Section A include questions related to the respondents' demography information such as gender, age, marital status, level of education, and the income level. Section B consist of 19 questions. Section C consist of 5 questions. While Section D consist of 5 questions. Section B, C and D consist of questions related to servant leadership, participative leadership, and an Islamic leadership (as shown in Table 3.1). The questions for Islamic leadership were based on the measurement developed by Zaim and colleagues (2022). The questions for servant leadership were based on the measurement developed by Zhang and colleagues (2016). While the questions for participative leadership were based on the measurement developed by Mesu and colleagues (2016).

The questionnaire for employees' supervisor has been divided into two sections. Section A include questions related to demography, while Section B include questions related to job performance. The item for job performance is based on the item developed by Chadee and colleagues (2016).

**Table 3.1:** Distribution of variables.

Variable	Item	Scale	Source
Islamic Leadership	19	5 Likert Scale	Zaim, H. et al. (2022)
Servant Leadership	5	5 Likert Scale	Zhang et al. (2016)
Participative Leadership	5	5 Likert Scale	Mesu et al (2016)
Employee Performance	7	5 Likert Scale	Chadee, D et al. (2016).

Below are the details of question for each variable.

1. Islamic leadership (Zaim, H. et al., 2022)

➤ Justice

- 1) My supervisor acts fairly about promotions
- 2) My supervisor is being fair to his/her subordinates
- 3) My supervisor always avoids favouritism (e.g. Nepotism)
- 4) My supervisor equally employs the rules for everyone
- 5) My supervisor acts fairly regarding the decisions about his/her subordinates
- 6) My supervisor allocates the workload fairly

➤ Religiosity

- 1) I think my supervisor is a religious person
- 2) My supervisor uses religious sources as a guide in his work life

- 3) My supervisor avoids actions that his religion prohibits
- 4) I believe that my supervisor's core values originate from his religion
- 5) My supervisor is sensitive about religious practices

➤ Kindness

- 1) My supervisor always can control his anger
- 2) My supervisor is a tolerant person
- 3) My supervisor's behaviours are balanced
- 4) I think my supervisor is a polite person

➤ Wisdom

- 1) My supervisor has technical knowledge about his job
- 2) My supervisor is an intellectual
- 3) My supervisor's knowledge is one of the most important criteria for his right decision-making
- 4) My supervisor has the ability to use right knowledge at right time.

2. Servant Leadership (Zhang et al., 2016)

- 1) The supervisor puts my best interests ahead of his/her own.
- 2) The supervisor does everything he/she can to serve me.
- 3) The supervisor sacrifices his/her own interests to meet my needs.
- 4) The supervisor goes above and beyond the call of duty to meet my needs.
- 5) The supervisor is the one I would turn to if I had a personal trauma.

3. Participative Leadership (Mesu et al., 2016)

- 1) The supervisor considers subordinates
- 2) The supervisor consults before taking action
- 3) The supervisor consults when faced with problem
- 4) The supervisor asks for suggestions
- 5) The supervisor advises on assignments

4. Job performance (Chadee. D et al., 2016)

- 1) Adequately completes assigned duties
- 2) Fulfils responsibilities specified in job description
- 3) Performs tasks that are expected of him/her
- 4) Meets formal performance requirements of the job
- 5) Engages in activities that will directly affect his/her performance evaluation
- 6) Neglect aspects of the job he/she is obligated to perform
- 7) Fails to perform essential duties

**3.6 Data Analysis Method and Procedure**

The data for this study has been analysed using IBM SPSS Statistics version 23. The procedure suggested by Pallant (2020) was followed to analyse the data of this study as details below:

**3.6.1 Screening and cleaning the data**

Before start to analyse data, it is essential to check the data set for errors. It is very easy to make mistakes when entering data, and unfortunately some errors can completely mess up the analyses.

The data screening process involved two steps:

Step 1: Check for errors. In other word, check the variables scores that are out of range (not within the range of possible scores).

Step 2: Find and correct the error in the data file. In other word, find where in the data file this error occurred (which case is involved) and correct or delete the value.

### **3.6.2 Checking for normality**

Normal is used to describe a symmetrical, bell shaped curve, which has the greatest frequency of scores in the middle with smaller frequencies towards the extremes. Normality can be assessed to some extent by obtaining skewness and kurtosis value. If the distribution is perfectly normal, the skewness and kurtosis value is 0.

### **3.6.3 Exploratory Factor Analysis (EFA)**

The function of exploratory factor analysis (EFA) is to validate the item to make sure that the item is suitable to measure the variables. There are three process to validate the item. The three processes begin with the result of KMO and Bartlett's Test. The value of Kaiser – Meyer Olkin (KMO) must at least 0.50 and greater. However, for Bartlett's Test value must 0.05 or below. The purpose of KMO and Bartlett's Test is to make sure the data is suitable for factor analysis.

The second process is to evaluate the Eigen value more than 1.0 to ensure the item measure the same thing. The third process is to identify the loading value of each question to the variable. The loading value means the percentage each question contributes to the variable.

### **3.6.4 Reliability of a Scale**

The reliability test for each variable of this study was analysed through Cronbach's Alpha. The Cronbach's Alpha testing used as it is the most well accepted reliability test. According to Cronbach (1946), the closer Cronbach Alpha interpretation is as details below:

- 1) Reliability less than 0.6 considered poor
- 2) Reliability in the range 0.7 is considered to be acceptable
- 3) Reliability more than 0.8 are considered to be good.

### **3.6.5 Descriptive Analysis**

The descriptive analysis is conducted to analyze the mean and standard deviation of the variables. The descriptive analysis also is conducted to analyze the correlation between the variables.

### **3.7 Chapter Summary**

This chapter describes and explains the methodological aspect of this study including the research design, the population and sample, instrument, and data collection method and procedure. The next Chapter 4 will provide the result of data analysis.